AMENDED CLAIMS

[received by the International Bureau on 08 August 2005 (08.08.2005); original claim 1 amended]

1. A compound of the formula (I)

$$Z\text{-}C(R^1R^2)\text{-}C(R^3NH_2)\text{-}C(R^4R^5)\text{-}X\text{-}N(R^6R^7) \qquad (I),$$

or a pharmaceutically acceptable salt thereof, wherein

Z is selected from the group consisting of phenyl; naphthyl; indenyl; $C_{3\text{-}7}$ cycloalkyl; indanyl; tetralinyl; decalinyl; heterocycle; and heterobicycle, wherein Z is optionally substituted with one or more R^8, wherein R^8 is independently selected from the group consisting of halogen; CN; OH; NH_2; oxo (=O), where the ring is at least partially saturated; R^9; and R^{10};

R^9 is selected from the group consisting of $C_{1\text{-}6}$ alkyl; O-$C_{1\text{-}6}$ alkyl; and S-$C_{1\text{-}6}$ alkyl, wherein R^9 is optionally interrupted by oxygen and wherein R^9 is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{10} is selected from the group consisting of phenyl; heterocycle; and $C_{3\text{-}7}$ cycloalkyl, wherein R^{10} is optionally substituted with one or more R^{11}, wherein R^{11} is independently selected from the group consisting of halogen; CN; OH; NH_2; oxo (=O), where the ring is at least partially saturated; $C_{1\text{-}6}$ alkyl; O-$C_{1\text{-}6}$ alkyl; and S-$C_{1\text{-}6}$ alkyl;

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New Claims 1 to 36

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or a pharmaceutically acceptable salt thereof, wherein

Z is selected from the group consisting of phenyl; naphthyl; indenyl; $C_{3\text{-}7}$ cycloalkyl; indanyl; tetralinyl; decalinyl; heterocycle; and heterobicycle, wherein Z is optionally substituted with one or more R^8, wherein R^8 is independently selected from the group consisting of halogen; CN; OH; NH_2; oxo (=O), where the ring is at least partially saturated; R^9; and R^{10};

R^9 is selected from the group consisting of $C_{1\text{-}6}$ alkyl; O-$C_{1\text{-}6}$ alkyl; and S-$C_{1\text{-}6}$ alkyl, wherein R^9 is optionally interrupted by oxygen and wherein R^9 is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{10} is selected from the group consisting of phenyl; heterocycle; and $C_{3\text{-}7}$ cycloalkyl, wherein R^{10} is optionally substituted with one or more R^{11}, wherein R^{11} is independently selected from the group consisting of halogen; CN; OH; NH_2; oxo (=O), where the ring is at least partially saturated; $C_{1\text{-}6}$ alkyl; O-$C_{1\text{-}6}$ alkyl; and S-$C_{1\text{-}6}$ alkyl;

R^1, R^4 are independently selected from the group consisting of H; F; OH; and R^{4a};

R^2, R^5 are independently selected from the group consisting of H; F; and R^{4b};

R^{4a} is independently selected from the group consisting of C_{1-6} alkyl; and O-C_{1-6} alkyl, wherein R^{4a} is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{4b} is C_{1-6} alkyl, wherein R^{4b} is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^3 is selected from the group consisting of H; and C_{1-6} alkyl;

Optionally one or more pairs of R^1, R^2, R^3, R^4, R^5 independently selected from the group consisting of R^1/R^2; R^2/R^3; R^3/R^4; and R^4/R^5 form a C_{3-7} cycloalkyl ring, which is optionally substituted with one or more of R^{12}, wherein R^{12} is independently selected from the group consisting of F; Cl; and OH;

X is selected from the group consisting of S(O); $S(O)_2$; C(O); and $C(R^{13}R^{14})$;

R^{13}, R^{14} are independently selected from the group consisting of H; F; C_{1-6} alkyl; R^{15}; and R^{16};

Optionally one or both pairs of R^5, R^{13}, R^{14} selected from the group consisting of R^5/R^{13}; and R^{13}/R^{14} form a C_{3-7} cycloalkyl ring, which is optionally substituted with one or more R^{17}, wherein R^{17} is independently selected from the group consisting of F; Cl; and OH;

R^{15} is selected from the group consisting of phenyl; naphthyl; and indenyl, wherein R^{15} is optionally substituted with one or more R^{18}, wherein R^{18} is independently selected from the group consisting of R^{19}; R^{20}; halogen; CN; COOH; OH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)-C_{1-6} alkyl; $C(O)N(R^{21})$-C_{1-6} alkyl; $S(O)_2N(R^{21})$-C_{1-6} alkyl; $S(O)N(R^{21})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $N(R^{21})S(O)_2$-C_{1-6} alkyl; and $N(R^{21})S(O)$-C_{1-6} alkyl, wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{16} is selected from the group consisting of heterocycle; heterobicycle; C_{3-7} cycloalkyl; indanyl; tertralinyl; and decalinyl, wherein R^{16} is optionally substituted with one or more R^{22}, wherein R^{22} is independently selected from the group consisting of R^{19}; R^{20}; halogen; CN; OH; oxo (=O), where the ring is at least partially saturated; NH_2; COOH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; $N(R^{23})$-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)-C_{1-6} alkyl; $C(O)N(R^{23})$-C_{1-6} alkyl; $N(R^{23})$-C(O)-C_{1-6} alkyl; $S(O)_2N(R^{23})$-C_{1-6} alkyl; $S(O)N(R^{23})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $N(R^{23})S(O)_2$-C_{1-6} alkyl; and $N(R^{23})S(O)$-C_{1-6} alkyl, wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{19} is selected from the group consisting of phenyl; and naphthyl, wherein R^{19} is optionally substituted with one or more R^{24}, wherein R^{24} is independently selected from the group consisting of halogen; CN; COOH; OH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)-C_{1-6} alkyl; $C(O)N(R^{25})$-C_{1-6} alkyl; $S(O)_2N(R^{25})$-C_{1-6} alkyl; $S(O)N(R^{25})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $N(R^{25})S(O)_2$-C_{1-6} alkyl; and $N(R^{25})S(O)$ -C_{1-6} alkyl, wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{20} is selected from the group consisting of heterocycle; heterobicycle; and C_{3-7} cycloalkyl; wherein R^{20} is optionally substituted with one or more R^{26}, wherein R^{26} is independently selected from the group consisting of halogen; CN; OH; oxo

(=O), where the ring is at least partially saturated; NH_2; COOH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; $N(R^{27})$-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)-C_{1-6} alkyl; $C(O)N(R^{27})$- C_{1-6} alkyl; $N(R^{27})$-C(O)-C_{1-6} alkyl; $S(O)_2N(R^{27})$-C_{1-6} alkyl; $S(O)N(R^{27})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $N(R^{27})S(O)_2$-C_{1-6} alkyl; and $N(R^{27})S(O)$-C_{1-6} alkyl wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{21}, R^{23}, R^{25}, R^{27} are independently selected from the group consisting of H; and C_{1-6}alkyl, which is optionally substituted with one or more of R^{28}, wherein R^{28} is independently selected from the group consisting of F; Cl and OH;

R^6, R^7 are independently selected from the group consisting of H; $(C(R^{29}R^{30}))_m$-X^1-Z^1; $(C(R^{31}R^{32}))_n$-X^2-X^3-Z^2; and C_{1-4} alkyl, which is substituted with one or more R^{29a}, wherein R^{29a} is independently selected from the group consisting of R^{29b}; and Z^1, provided that R^6, R^7 are selected so that not both of R^6, R^7 are independently selected from the group consisting of H; CH_3; CH_2CH_3; $CH_2CH_2CH_3$; and $CH(CH_3)_2$;

R^{29}, R^{29b}, R^{30}, R^{31}, R^{32} are independently selected from the group consisting of H; halogen; CN; OH; NH_2; COOH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; C_{1-6} alkyl; O-C_{1-6} alkyl; $N(R^{32a})$-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)-C_{1-6} alkyl; $C(O)N(R^{32a})$-C_{1-6} alkyl; $N(R^{32a})$-C(O)-C_{1-6} alkyl; $S(O)_2N(R^{32a})$-C_{1-6} alkyl; $S(O)N(R^{32a})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $N(R^{32a})S(O)_2$-C_{1-6} alkyl; and $N(R^{32a})S(O)$-C_{1-6} alkyl wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{32a} is selected from the group consisting of H; and C_{1-6} alkyl, which is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

Optionally one or more pairs of R^{29}, R^{30}, R^{31}, R^{32} independently selected from the group consisting of R^{29}/R^{30}; and R^{31}/R^{32} form a C_{3-7} cycloalkyl ring, which is option-

ally substituted with one or more R^{32b}, wherein R^{32b} is independently selected from the group consisting of F; Cl; and OH;

m is 0, 1, 2, 3 or 4;

n is 2, 3 or 4;

X^1 is independently selected from the group consisting of a covalent bond; -C_{1-6} alkyl-; -C_{1-6} alkyl-O-; -C_{1-6} alkyl-N(R^{33})-; -C(O)-; -C(O)-C_{1-6} alkyl-; -C(O)-C_{1-6} alkyl-O-; -C(O)-C_{1-6} alkyl-N(R^{33})-; -C(O)O-; -C(O)O-C_{1-6} alkyl-; -C(O)O-C_{1-6} alkyl-O-; -C(O)O-C_{1-6} alkyl-N(R^{33})-; -C(O)N(R^{33})-; -C(O)N(R^{33})-C_{1-6} alkyl-; -C(O)N(R^{33})-C_{1-6} alkyl-O-; -C(O)N(R^{33})-C_{1-6} alkyl-N(R^{34})-; -$S(O)_2$-; -S(O)-; -$S(O)_2$-C_{1-6} alkyl-; -S(O)-C_{1-6} alkyl-; -$S(O)_2$-C_{1-6} alkyl-O-; -S(O)-C_{1-6} alkyl-O-; -$S(O)_2$-C_{1-6} alkyl-N(R^{33})-; and -S(O)-C_{1-6} alkyl-N(R^{33})-; wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

X^2 is selected from the group consisting of -O-; -S-; -S(O)-; $S(O)_2$-; and -N(R^{35})-;

X^3 is selected from the group consisting of a covalent bond; -C_{1-6} alkyl-; -C_{1-6} alkyl-O-; -C_{1-6} alkyl-N(R^{36})-; -C(O)-; -C(O)-C_{1-6} alkyl-; -C(O)-C_{1-6} alkyl-O-; -C(O)-C_{1-6} alkyl-N(R^{36})-; -C(O)O-; -C(O)O-C_{1-6} alkyl-; -C(O)O-C_{1-6} alkyl-O-; -C(O)O-C_{1-6} alkyl-N(R^{36})-; -C(O)N(R^{36})-; -C(O)N(R^{36})-C_{1-6} alkyl-; -C(O)N(R^{36})-C_{1-6} alkyl-O-; and -C(O)N(R^{36})-C_{1-6} alkyl-N(R^{37})-; wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

Optionally X^2-X^3 are independently selected from the group consisting of -N(R^{35})-$S(O)_2$; -N(R^{35})-S(O)-; -N(R^{35})-$S(O)_2$-C_{1-6} alkyl-; -N(R^{35})-S(O)-C_{1-6} alkyl-; -N(R^{35})-$S(O)_2$-C_{1-6} alkyl-O-; -N(R^{35})-S(O)-C_{1-6} alkyl-O-; -N(R^{35})-$S(O)_2$-C_{1-6} alkyl-

$N(R^{36})$-; and -$N(R^{35})$-S(O)-C_{1-6} alkyl-$N(R^{36})$-; wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

R^{33}, R^{34}, R^{35}, R^{36}, R^{37} are independently selected from the group consisting of H; and C_{1-6} alkyl, which is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

Z^1, Z^2 are independently selected from the group consisting of Z^3; and -$C(R^{37a})Z^{3a}Z^{3b}$;

R^{37a} is selected from the group consisting of H; and C_{1-6} alkyl, which is optionally substituted with one or more F;

Z^3, Z^{3a}, Z^{3b} are independently selected from the group consisting of H; T^1; T^2; C_{1-6} alkyl; C_{1-6} alkyl-T^1; and C_{1-6} alkyl-T^2; wherein each C_{1-6} alkyl is optionally substituted with one or more R^{37b}, wherein R^{37b} is independently selected from the group consisting of halogen; CN; OH; NH_2; COOH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; C_{1-6} alkyl; O-C_{1-6} alkyl; $N(R^{37c})$-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)-C_{1-6} alkyl; $C(O)N(R^{37c})$-C_{1-6} alkyl; $N(R^{37c})$-C(O)-C_{1-6} alkyl; $S(O)_2N(R^{37c})$-C_{1-6} alkyl; $S(O)N(R^{37c})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $N(R^{37c})S(O)_2$-C_{1-6} alkyl; and $N(R^{37c})$S(O)-C_{1-6} alkyl; wherein each C_{1-6} alkyl is optionally substituted with one or more halogen independently selected from the group consisting of F; and Cl;

T^1 is selected from the group consisting of phenyl; naphthyl; and indenyl; wherein T^1 is optionally substituted with one or more R^{38}; wherein R^{38} is independently selected from the group consisting of halogen; CN; R^{39}; COOH; OH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; $COOT^3$; OT^3; ST^3; $C(O)N(R^{40})T^3$; $S(O)_2N(R^{40})T^3$; $S(O)N(R^{40})T^3$ and T^3;

T^2 is selected from the group consisting of C_{3-7} cycloalkyl; indanyl; tetralinyl; decalinyl; heterocycle; and heterobicycle; wherein T^2 is optionally substituted with one or more R^{41}, wherein R^{41} is independently selected from the group consisting of halogen; CN; R^{42}; OH; oxo (=O), where the ring is at least partially saturated; NH_2; COOH; $C(O)NH_2$; $S(O)_2NH_2$; $S(O)NH_2$; $COOT^3$; OT^3; $C(O)N(R^{43})T^3$; $S(O)_2N(R^{43})T^3$; $S(O)N(R^{43})T^3$; $N(R^{43})T^3$; and T^3;

R^{39} is selected from the group consisting of C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)- C_{1-6} alkyl; $C(O)N(R^{44})$-C_{1-6} alkyl; $S(O)_2N(R^{44})$-C_{1-6} alkyl; $S(O)N(R^{44})$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; $N(R^{44})S(O)_2$-C_{1-6} alkyl; and $N(R^{44})S(O)$ -C_{1-6} alkyl; wherein each C_{1-6} alkyl is optionally substituted with one more R^{45}, wherein R^{45} is independently selected from the group consisting of F; $COOR^{46}$; $C(O)N(R^{46}R^{47})$; $S(O)_2N(R^{46}R^{47})$; OR^{46}; $N(R^{46}R^{47})$; T^3; O-T^3; and $N(R^{46})$-T^3;

R^{42} is selected from the group consisting of C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; $N(R^{48})$-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)- C_{1-6} alkyl; $C(O)N(R^{48})$- C_{1-6} alkyl; $N(R^{48})$-$C(O)$-C_{1-6} alkyl; $S(O)_2N(R^{48})$-C_{1-6} alkyl; $S(O)$ $N(R^{48})$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; $-N(R^{48})S(O)_2$-C_{1-6} alkyl; and $-N(R^{48})S(O)$-C_{1-6} alkyl; wherein each C_{1-6} alkyl is optionally substituted with one or more R^{45}, wherein R^{45} is independently selected from the group consisting of F; $COOR^{49}$; $C(O)N(R^{49}R^{50})$; $S(O)_2N(R^{49}R^{50})$; $S(O)N(R^{49}R^{50})$; OR^{49}; $N(R^{49}R^{50})$; T^3; O-T^3; and $N(R^{49})$-T^3;

R^{40}, R^{43}, R^{44}, R^{46}, R^{47}, R^{48}, R^{49}, R^{50} are independently selected from the group consisting of H; and C_{1-6} alkyl;

T^3 is selected from the group consisting of T^4; and T^5;

T^4 is selected from the group consisting of phenyl; naphthyl; and indenyl; wherein T^4 is optionally substituted with one or more R^{51}, wherein R^{51} is independently selected from the group consisting of halogen; CN; $COOR^{52}$; OR^{52}; $C(O)N(R^{52}R^{53})$; $S(O)_2N(R^{52}R^{53})$; C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)-C_{1-6}

alkyl;
$C(O)N(R^{52})$- C_{1-6} alkyl; $S(O)_2N(R^{52})$-C_{1-6} alkyl; $S(O)N(R^{52})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O) -C_{1-6} alkyl; $N(R^{52})S(O)_2$-C_{1-6} alkyl; and $N(R^{52})S(O)$-C_{1-6} alkyl; wherein each C_{1-6} alkyl is optionally substituted with one more halogen selected from the group consisting of F; and Cl;

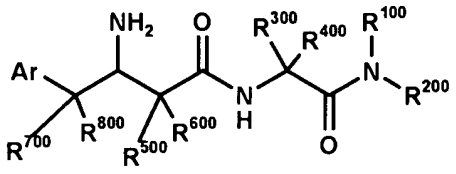
T^5 is selected from the group consisting of heterocycle; heterobicycle; C_{3-7} cycloalkyl; indanyl; tetralinyl; and decalinyl; wherein T^5 is optionally substituted with one or more R^{54}, wherein R^{54} is independently selected from the group consisting of halogen; CN; OR^{55}; oxo (=O), where the ring is at least partially saturated; $N(R^{55}R^{56})$; $COOR^{55}$; $C(O)N(R^{55}R^{56})$; $S(O)_2N(R^{55}R^{56})$; $S(O)N(R^{55}R^{56})$; C_{1-6} alkyl; O-C_{1-6} alkyl; S-C_{1-6} alkyl; $N(R^{55})$-C_{1-6} alkyl; COO-C_{1-6} alkyl; OC(O)- C_{1-6} alkyl; $C(O)N(R^{55})$- C_{1-6} alkyl; $N(R^{55})$-C(O)-C_{1-6} alkyl; $S(O)_2N(R^{55})$-C_{1-6} alkyl; $S(O)N(R^{55})$-C_{1-6} alkyl; $S(O)_2$-C_{1-6} alkyl; S(O)-C_{1-6} alkyl; $N(R^{55})S(O)_2$-C_{1-6} alkyl; and $N(R^{55})S(O)$-C_{1-6} alkyl; wherein each C_{1-6} alkyl is optionally substituted with one more halogen selected from the group consisting of F; and Cl;

R^{52}, R^{53}, R^{55}, R^{56}, are independently selected from the group consisting of H; and C_{1-6} alkyl;

with the proviso that the following compounds are excluded:

3-amino-N-cyclohexyl-4-phenyl-butyramide,
(S)-3-amino-N-[5-(6-dimethylamino-purin-9-yl)-4-hydroxy-2-hydroxymethyl-tetrahydrofuran-3-yl]-4-p-tolyl-butyramide,
(S)-2-((S)-2-amino-3-phenyl-propane-1-sulfonylamino)-3-phenyl-propionic acid,
(S)-3-amino-4,N-diphenyl-butyramide;

and with the further proviso that compounds according to the following formula are excluded:



wherein

Ar is phenyl optionally substituted with 1, 2, 3, 4, or 5 groups independently selected from halogen; C_{1-6} alkyl optionally substituted with 1 to 5 halogens; O-C_{1-6} alkyl optionally substituted with 1 to 5 halogens; and cyano,

R^{500}, R^{600}, R^{700}, R^{800} are independently selected from H; and C_{1-6} alkyl, optionally substituted by 1 or 2 F,

R^{300} and R^{400} are independently selected from hydrogen; C_{1-6} alkyl, which is optionally substituted by 1 or 2 F; and C_{3-7} cycloalkyl, optionally substituted by 1, 2, 3, 4 or 5 substituents independently selected from halogen and hydroxy,

R^{100} is selected from hydrogen; and C_{1-6} alkyl, optionally substituted by 1 or 2 F,

R^{200} is selected from hydrogen; C_{1-6} alkyl; C_{3-7} cycloalkyl; phenyl; HET1; C_{1-6} alkylphenyl; -C_{1-6} alkylAR2; -C_{1-6} alkyl-C_{3-7} cycloalkyl; -C_{1-6} alkyl-HET1; -C_{1-6} alkyl-HET2; -C_{1-6} alkyl-CO_2C_{1-6} alkyl; -C_{1-6} alkylOCO-C_{1-6} alkyl;-C_{1-6} alkylCO-C_{1-6} alkyl; -C_{1-6} alkylNHCO-C_{1-6} alkyl; -C_{1-6} alkylCONH-alkyl; -C_{1-6} alkylCON-di-C_{1-6} alkyl; -C_{1-6} alkylNH-C_{1-6} alkyl; -C_{1-6} alkylN-di-C_{1-6} alkyl; -C_{1-6} alkylNHSO_2-C_{1-6} alkyl; -C_{1-6} alkylSO_2NH-C_{1-6} alkyl; -C_{1-6} alkylSO_2-C_{1-6} alkyl; and -C_{1-6} alkylSO_2N-di(C_{1-6}) alkyl;

wherein each C_{1-6} alkyl is optionally substituted by 1 or 2 F; and

wherein phenyl, AR2, HET1, HET2 and C_{3-7} cycloalkyl are optionally substituted by 1, 2, 3, 4 or 5 substituents independently selected from phenyl (optionally substituted with halogen, trifluoromethyl, C_{1-4} alkyl or O-C_{1-4} alkyl), halogen, C_{1-6} alkyl, haloC_{1-6} alkyl, dihaloC_{1-6} alkyl, trifluoromethyl, O-C_{1-6} alkyl, carboxy-C_{1-6} alkyl, carboxy-C_{1-6} alkyoxy, hydroxy, amino, C_{1-6} alkylamino, diC_{1-6} alkylamino, -$CONH_2$, - CONH-C_{1-6} alkyl, CON-di(C_{1-6})alkyl, -NHCO-C_{1-6} alkyl, -SO_2-C_{1-6} alkyl, SO_2NH_2, -SO_2NH-C_{1-6} alkyl, SO_2N-diC_{1-6} alkyl and –$NHSO_2$-C_{1-6} alkyl,

further

R^{100} and R^{200} may together with the nitrogen to which they are attached form a ring defined by HET1 or HET3,

wherein a ring comprising R^{100} and R^{200} is optionally substituted by 1 or 2 substituents independently selected from halogen, C_{1-6} alkyl, O-C_{1-6} alkyl, cyano, carboxy, carboxy-C_{1-6} alkyl, -CO_2-C_{1-6} alkyl, C_{1-6} alkylamino, di-(C_{1-6}) alkylamino, -NHCO-C_{1-6} alkyl, -CONH-C_{1-6} alkyl, -CON-di-C_{1-6} alkyl and HET1, wherein each C_{1-6} alkyl group is optionally substituted by 1 or 2 substituents independently selected from hydroxy and fluoro;

and

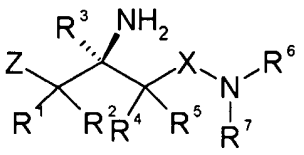
AR2 is a 8-, 9- or 10-membered unsaturated, partially or fully saturated bicyclic carbocylic ring;

HET1 is a 3-, 4-, 5- or 6-membered, unsaturated, partially or fully saturated monocyclic heterocyclyl ring containing up to four heteroatoms independently selected from O, N, and S (but not containing any O-O, O-S or S-S bonds) linked via a ring carbon atom or a ring nitrogen atom if the ring is not thereby quatemised, and wherein an available carbon, sulfur or nitrogen atom may be oxidized;

HET2 is a 8-, 9- or 10-membered, unsaturated, partially or fully saturated bicyclic heterocyclyl ring containing up to four heteroatoms independently selected from O, N, and S (but not containing any O-O, O-S or S-S bonds) and linked via a ring carbon atom in either of the rings comprising the bicyclic system; and

HET3 is a N-linked saturated bicyclic ring system containing up to 12 ring atoms including the linking nitrogen atom.

2. A compound according to claim 1 of formula (Ia)



(Ia)

or a pharmaceutically acceptable salt thereof, wherein Z, R^1-R^7 and X have the meaning as indicated in claim 1.

3. A compound according to claim 1 or 2, wherein Z is phenyl or heterocycle.

4. A compound according to any one of the preceding claims, wherein Z is optionally substituted with 1 or 2 R^8, which are the same or different.

5. A compound according to any one of the preceding claims, wherein R^8 is selected from the group consisting of Cl; F; CN; CH_3; and OCH_3.

6. A compound according to any one of the preceding claims, wherein Z is 2-Fluoro-phenyl.

7. A compound according to any one of the preceding claims, wherein R^1, R^4 are independently selected from the group consisting of H; F; OH; CH_3; and OCH_3.

8. A compound according to any one of the preceding claims, wherein R^2, R^5 are independently selected from the group consisting of H; F; and CH_3.

9. A compound according to any one of the preceding claims, wherein R^1, R^2, R^4, R^5 are H.

10. A compound according to any one of the preceding claims, wherein R^3 is H.

11. A compound according to any one of the preceding claims, wherein X is C(O) or $S(O)_2$.

12. A compound according to any one of the preceding claims, wherein R^6 is selected from the group consisting of H; and CH_3.

13. A compound according to any one of the preceding claims, wherein X^1 is a covalent bond.

14. A compound according to any one of the preceding claims, wherein m is 0, 1, 2 or 3.

15. A compound according to any one of the preceding claims, wherein R^7 is Z^1.

16. A compound according to any one of the preceding claims, wherein R^7 is C_{1-4} alkyl, substituted with 1-4 R^{29a}, which are the same or different.

17. A compound according to claim 16, wherein R^7 is selected from the group consisting of $CH(R^{29a})_2$; CHR^{29a}-CH_2R^{29a}; CH_2-$CH(R^{29a})_2$; CH_2-CHR^{29a}-CH_2R^{29a}; and CH_2-CH_2-$CH(R^{29a})_2$.

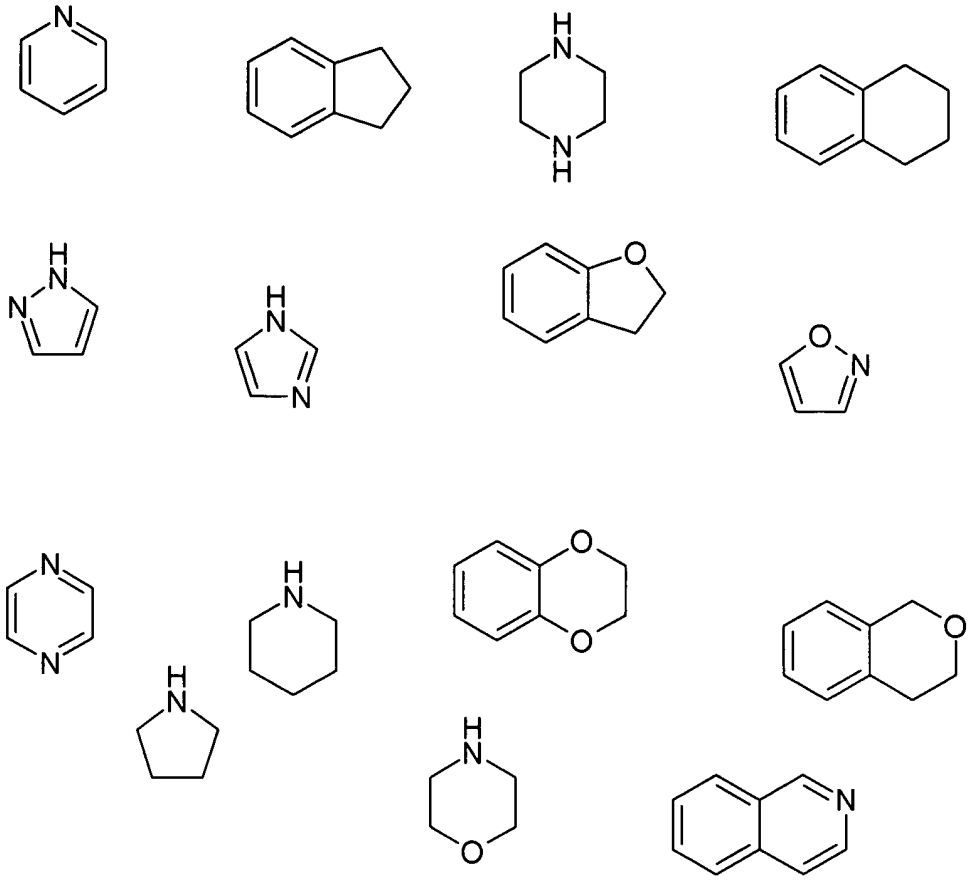
18. A compound according to any one of the preceding claims, wherein R^{29a} is selected from the group consisting of R^{29b}; and Z^1; and wherein R^{29b} is selected from the group consisting of H; F; Cl; NH_2; $NHCH_3$; $N(CH_3)_2$; CH_3; and C_2H_5.

19. A compound according to any one of the preceding claims, wherein R^{29a} is selected from the group consisting of R^{29b}; and Z^1; and wherein Z^1 is selected from the group consisting of T^1; and T^2.

20. A compound according to any one of the preceding claims, wherein T^1 is phenyl; and wherein T^1 is optionally substituted with 1-3 R^{38}, which are the same or different.

21. A compound according to any one of the preceding claims, wherein R^{38} is independently selected from the group consisting of F; Cl; CN; CH_3; C_2H_5; $CH_2CH_2CH_3$; $CH(CH_3)_2$; CF_3; O-CH_3; O-C_2H_5; S-CH_3; SO_2NH_2; T^3; and O-T^3.

22. A compound according to any one of the preceding claims, wherein T^2 is selected from the group consisting of



and wherein T^2 is optionally substituted with 1-2 R^{41}, which are the same or different.

23. A compound according to any one of the preceding claims, wherein R^{41} is selected from the group consisting of OH; CH_3; and T^3;

24. A compound according to any one of the preceding claims, wherein T^3 is T^4.

25. A compound according to any one of the preceding claims, wherein T^4 is phenyl, wherein T^4 is optionally substituted with 1-3 R^{51}, which are the same or different.

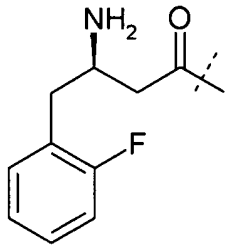
26. A compound according to any one of the preceding claims, wherein R^{51} is independently selected from the group consisting of F; Cl; CH_3; C_2H_5; $CH_2CH_2CH_3$; $CH(CH_3)_2$; CF_3; O-CH_3; O-C_2H_5; S-CH_3; and SO_2NH_2.

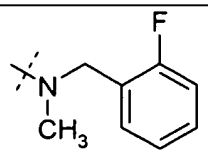
27. A compound according to any one of the preceding claims, wherein T^3 is T^5.

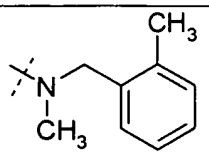
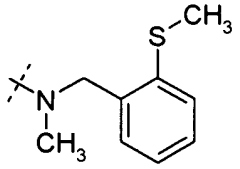
28. A compound according to any one of the preceding claims, wherein T^5 is heterocycle, wherein T^5 is optionally substituted with 1-2 R^{54}, which are the same or different.

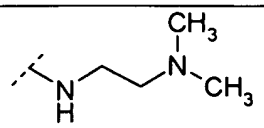
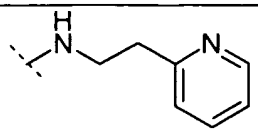
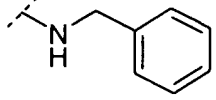
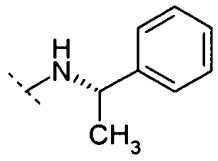
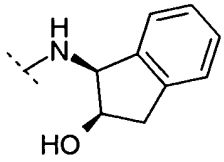
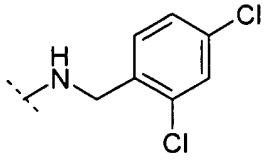
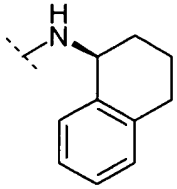
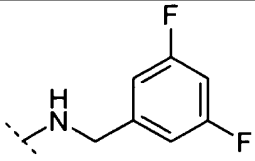
29. A compound according to any one of the preceding claims, wherein R^{54} is selected from the group consisting of OH; and CH_3.

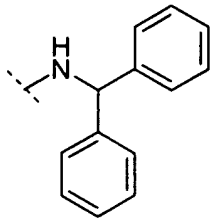
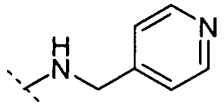
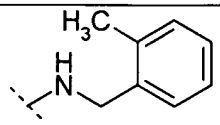
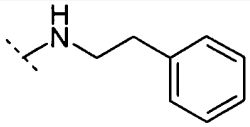
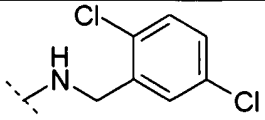
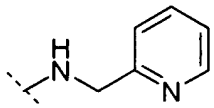
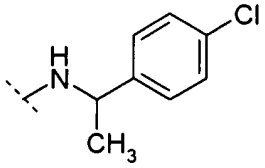
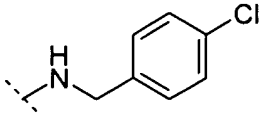
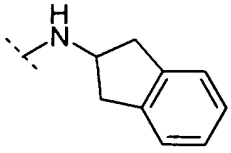
30. A compound according to claim 1 selected from the group consisting of

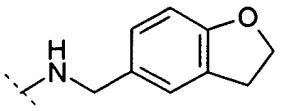
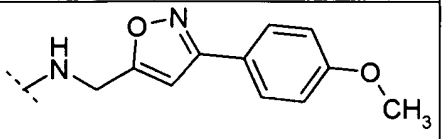
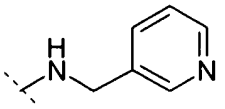
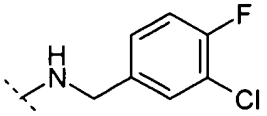
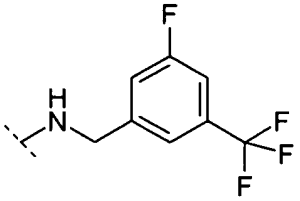
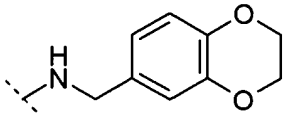
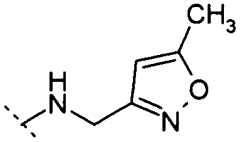
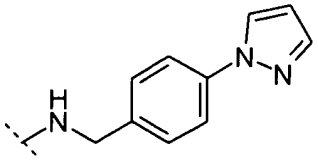
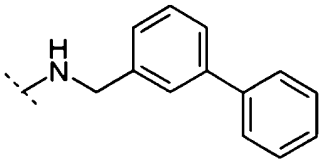
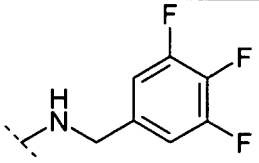
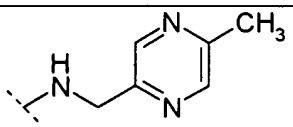
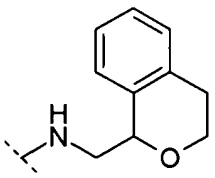
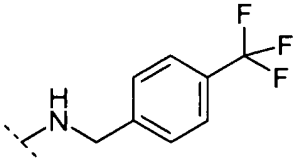
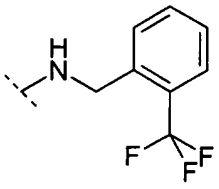
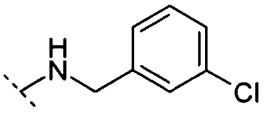


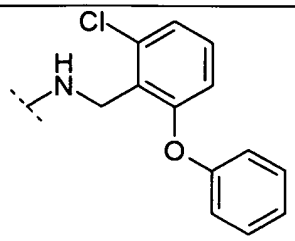
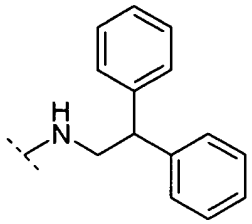
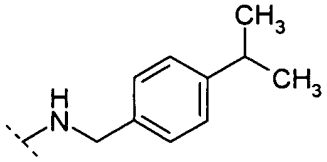
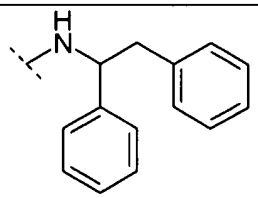
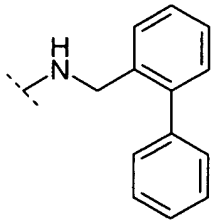
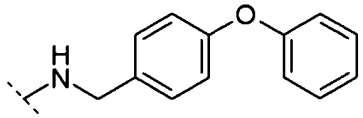
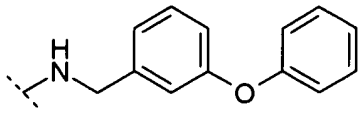
4	

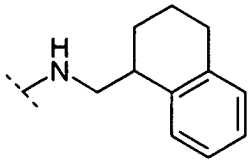
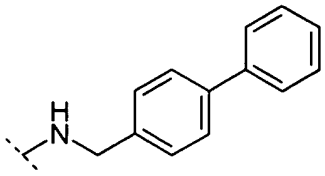
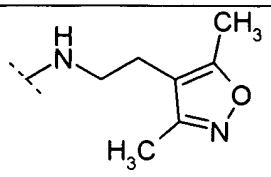
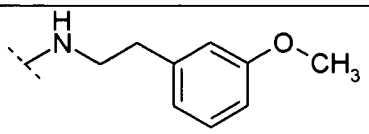
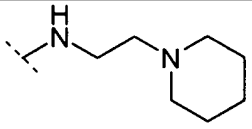
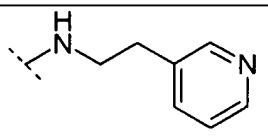
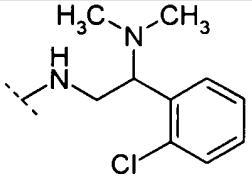
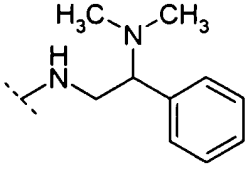
5	
6	

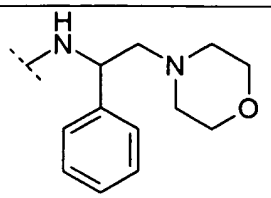
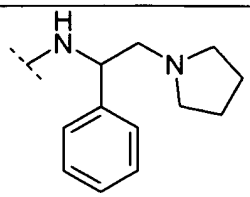
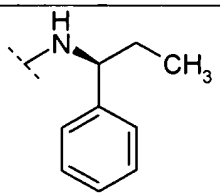
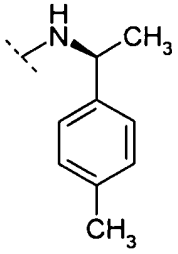
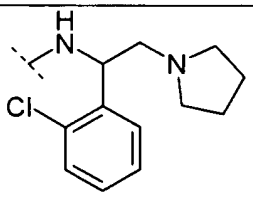
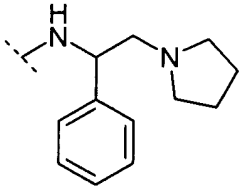
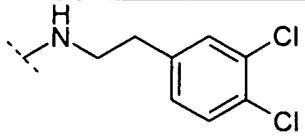
7	
8	
9	
10	
11	
12	
13	
14	

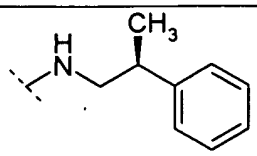
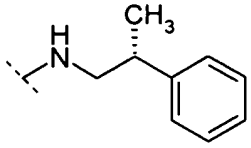
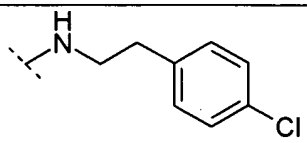
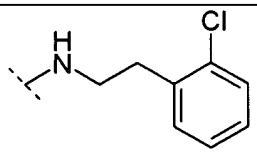
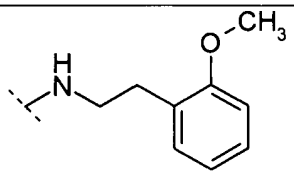
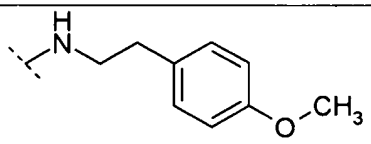
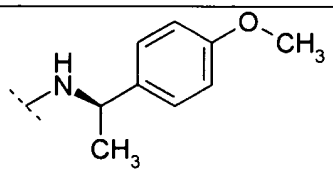
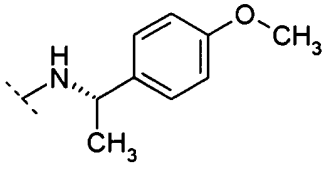
15	
16	
17	
18	
19	
20	
21	
22	
23	

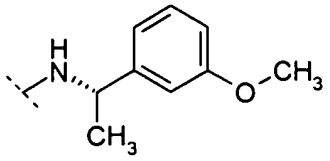
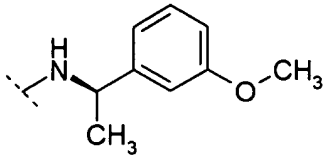
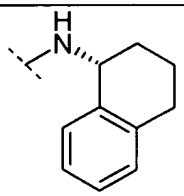
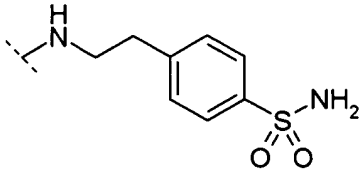
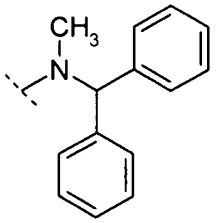
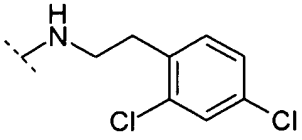
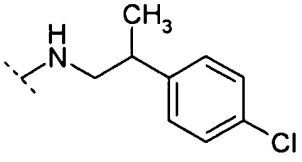
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	

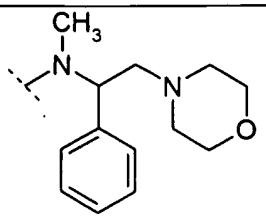
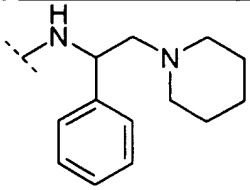
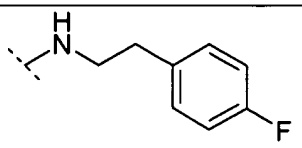
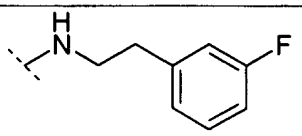
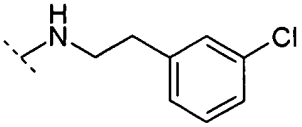
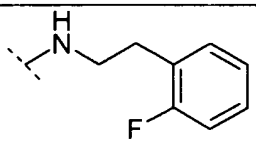
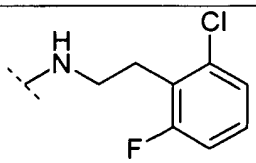
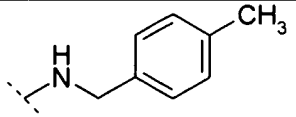
39	
40	
41	
42	
43	
44	
45	

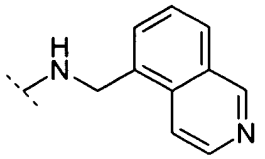
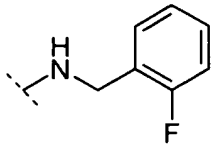
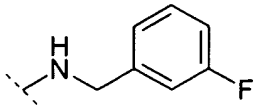
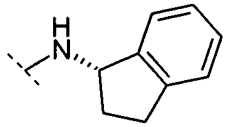
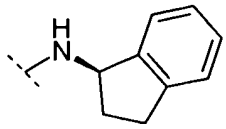
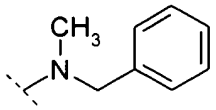
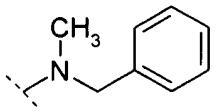
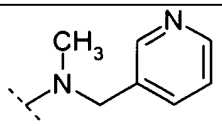
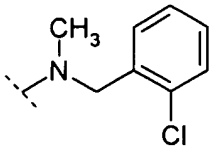
46	
47	
48	
49	
50	
51	
52	
53	

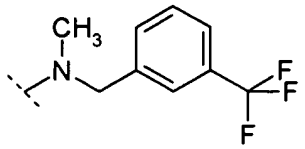
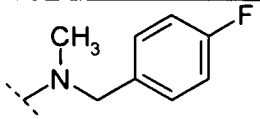
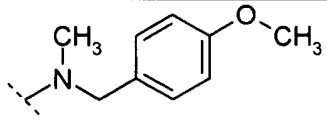
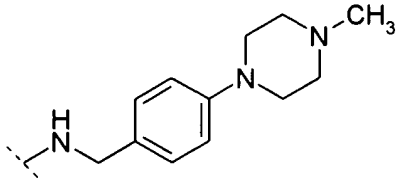
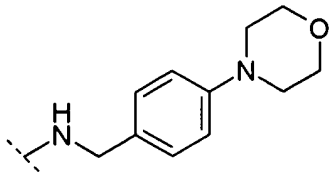
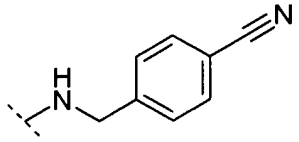
54	
55	
56	
57	
58	
59	
60	

61	
62	
63	
64	
65	
66	
67	
68	

69	
70	
71	
72	
73	
74	
75	

76	
77	
78	
79	
80	
81	
82	
83	

84	
85	
86	
87	
88	
89	
90	
91	
92	

93	
94	
95	
96	
97	
98	

31. A prodrug compound of a compound according to any one of the claims 1 to 30.

32. A pharmaceutical composition comprising a compound or a pharmaceutically acceptable salt thereof according to any one of the claims 1 to 31 together with a pharmaceutically acceptable carrier.

33. A pharmaceutical composition according to claim 32, comprising one or more additional compounds or pharmaceutically acceptable salts thereof selected from the group consisting of another compound according to any one of the claims 1 to 27; another DPP-IV inhibitor; insulin sensitizers; PPAR agonists; biguanides; protein tyrosinephosphatase-IB (PTP-1B) inhibitors; insulin and insulin mimetics; sulfonylureas and other insulin secretagogues; a-glucosidase inhibitors; glucagon receptor antagonists; GLP-1, GLP-1 mimetics, and GLP-1 receptor agonists; GIP, GIP mimetics, and GIP receptor agonists; PACAP, PACAP mimetics, and PACAP receptor 3 agonists; cholesterol lowering agents; HMG-CoA reductase inhibitors; sequestrants; nicotinyl alcohol; nicotinic acid or a salt thereof; PPARa agonists; PPARoly dual agonists; inhibitors of cholesterol absorption; acyl CoA : cholesterol acyltransferase inhibitors; anti-oxidants; PPARo agonists; antiobesity compounds; an ileal bile acid transporter inhibitor; and anti-inflammatory agents.

34. A compound or a pharmaceutically acceptable salt thereof of any one of the claims 1 to 31 for use as a medicament.

35. Use of a compound or a pharmaceutically acceptable salt thereof of any of the claims 1 to 31 for the manufacture of a medicament for the treatment or prophylaxis of non-insulin dependent (Type II) diabetes mellitus; hyperglycemia; obesity; insulin resistance; lipid disorders; dyslipidemia; hyperlipidemia; hypertriglyceridemia; hypercholestrerolemia; low HDL; high LDL; atherosclerosis; growth hormone deficiency; diseases related to the immune response; HIV infection; neutropenia; neuronal disorders; tumor metastasis; benign prostatic hypertrophy; gingivitis; hypertension; osteoporosis; diseases related to sperm motility; low glucose tolerance; insulin resistance;

ist sequelae; vascular restenosis; irritable bowel syndrome; inflammatory bowel disease; including Crohn's disease and ulcerative colitis; other inflammatory conditions; pancreatitis; abdominal obesity; neurodegenerative disease; anxiety; depression; retinopathy; nephropathy; neuropathy; Syndrome X; ovarian hyperandrogenism (polycystic ovarian syndrome; Type n diabetes; or growth hormone deficiency.

36. Use of a compound according to any one of the claims 1 to 31 as DPP-IV inhibitor.